



FLIGHT

The
**AIRCRAFT
ENGINEER
&
AIRSHIPS**



First Aero Weekly in the World

Founder and Editor: STANLEY SPOONER

A Journal devoted to the Interests, Practice, and Progress of Aerial Locomotion and Transport

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CONTENTS

	PAGE
Editorial Comment	
Empire Aviation	683
Saturday's Demonstration at Croydon	684
Hawker Hedgehog	685
Wing Loading and World's Records	686
Another Australian Flight: Visit to South Sea Islands	688
Alighting and Arresting Mechanisms	689
U.S. Air Mail Services	690
"From the Four Winds"	692
Royal Air Force	693
R.A.F. Intelligence	693
Light 'Plane Club Doings	694

DIARY OF FORTHCOMING EVENTS

Club Secretaries and others desirous of announcing the dates of important fixtures are invited to send particulars for inclusion in the following list:—

1926

- Oct. 23
Visit of Dominion Premiers to Croydon Aerodrome.
- Oct. 24-28
Coppa del Mare, Italy.
- Oct. 26
Mr. G. H. Dowty. "Aircraft Alighting and Arresting Mechanisms," before I.Ae.E.
- Nov. 4
Mr. G. F. Mucklow. "Hydrogen as an Auxiliary Fuel for a Solid Injection Engine," Joint Meeting R.Ae.S. and Inst.A.E.
- Nov. 18
Mr. R. S. Capon. "Methods of Performance Testing and Analysis," before R.Ae.S.
- Nov. 21
Lecture, "Meteorology in the Service of Man" by Dr. G. C. Simpson, C.B., at the Guild-house, Eccleston Square, S.W. 1.
- Dec. 2
Mr. P. B. Bradshaw. "Alloy Steels for Aero Work," before R.Ae.S.
- Dec. 3-19
Paris Aero Show
- Dec. 16
Wing-Comdr. C. D. Breeze, A.F.C., R.A.F. "The Training of Aircraft Apprentices," before R.Ae.S.

EDITORIAL COMMENT.



THE importance to the Empire of treating aviation from the Imperial point of view is by now so well recognised that there is no necessity for us to dwell upon the point in connection with the Imperial Conference at present sitting in London. Our very excellent Air Minister, Sir Samuel Hoare, may be relied upon to do all that is possible in the way of putting the case for Empire Aviation clearly and concisely. That the British Empire, scattered as it is over the face of the earth, is in greater need of rapid communications than probably any other nation in the world will not be denied, and the whole question therefore reduces itself to finding ways and means. Doubtless, aviation will be very fully discussed during the Conference, not only from the Empire defence point of view, but also from that of civil aviation. Concerning the former, it would appear probable that one of the main subjects for discussion will be the question as to whether and to what extent, the Dominions should contribute towards the common air defences of the Empire, and what form such contributions should take. It is obvious that questions such as these cannot profitably be discussed in a technical journal, nor, as the politicians have it, is it "in the best interests of the nation" that the information which must necessarily be given at such a conference should be made public. As regards types of machines for air defence purposes, the Dominion Premiers will have an opportunity at Croydon, on Saturday, of seeing some of the machines in use at home, although it is to be feared that some of our latest and most interesting types may not be present. The reason for this is not quite obvious. Many of them took part in the "fly-past" in the last R.A.F. Pageant, at which may be assumed to have been present hundreds of representatives of nations not members of the British Empire. Why these machines should be withheld from the demonstration on Saturday is, therefore, not quite obvious.

Apart from this absence of really new types, there is the question of our latest seaplanes. These, obviously, could not be shown at Croydon, but it is to be hoped that arrangements will be made for the Dominion representatives to visit some air station at which all our latest types can be demonstrated. Felixstowe suggests itself, and machines from other stations could be collected there. In view of the tremendous importance of the seaplane to the British Empire the fullest possible opportunity should be afforded the Dominion representatives of familiarising themselves with the very high state of development which the seaplane has reached in this country.

We gather that it is intended that the Dominion representatives should visit Cardington in order to see the new mooring-mast erected there and to inspect the work on the new large airship. All well and good and eminently proper. But the seaplane is likely to be of at least as great importance as the airship, and should not be overlooked.

Concerning civil aviation, the visit to Croydon should help to show how a modern airport is organised and operated, while the machines that will be present will include all the latest types of commercial aeroplanes. Again, however, the seaplane type will be

absent, except for the fact that the Short "Mussel" and the D.H.50J will be present in the form of aeroplanes. It is somewhat unfortunate that we have not, in the Mother Country, any organised seaplane route which it is worth while to put forward as an example, the weekly service to the Channel Islands being a farce.

On the subject of Empire air routes, doubtless the Imperial Conference will be fully informed of the progress that has been made in the planning and organisation of the Cairo-Karachi line which is to commence operations early next year, as well as of the latest developments in connection with the airship programme, which latter may be of greater interest to the Canadian representatives, since an airship route across the Atlantic seems more likely to be feasible in the near future than does a seaplane service.

The all-important subject, however, so far as the Imperial Conference is concerned, will undoubtedly be that of Dominion participation in financing Empire Aviation. We believe that all the representatives fully realise the importance of this, and, consequently, we look forward hopefully to the Conference bearing fruit.

SATURDAY'S DEMONSTRATION AT CROYDON

A VERY interesting programme has been arranged for the demonstration which is being held at the London Terminal Aerodrome, at Croydon, on Saturday next, October 23, when the Dominion Premiers and other representatives, at present attending the Imperial Conference in London, will be present. The demonstration, which has been given the official title of "Inspection of Service and Commercial Aviation," will commence at 2.30 p.m. In this connection we should point out that the normal public enclosure at the Croydon Aerodrome will be closed on that day, but that another public enclosure is being arranged along Plough Lane, in which there will be free admission to a limited number of spectators.

The first item on the programme consists of an inspection of a large number of machines which will be lined up on the aerodrome. Particulars of the machines which will be on view in this aircraft "park," will be found at the end of these notes. At the completion of the inspection of the aircraft park on the aerodrome, there will be an exhibition of aerobatics by two pilots of No. 56 (Fighter) Squadron on Armstrong-Whitworth "Siskins." This will be followed by a demonstration of air manoeuvres by radio telephony by nine pilots of No. 41 (Fighter) Squadron, who will be mounted on Gloster "Grebes."

The last event in which Service aircraft take part will be a flight over the aerodrome of two squadrons (9 and 7) of Vickers "Virginias," which will fly over in bombing formation.

Possibly, by way of contrast between these big bombers and small two-seater light 'planes, the next event will be a display of the De Havilland "Moth" by Mrs. Elliott-Lynn, who will take out the machine from its shed, unfold its wings and fly around the aerodrome, alighting again and bringing the machine into its shed.

During the afternoon, visitors will be given the opportunity of making flights in the Armstrong-Whitworth "Argosy" and in the Handley Page W.10, which will go up at 3.40 and again at 4 p.m.

While these passenger flights are taking place, such visitors as are still on the ground will pay a visit of inspection to a series of exhibits which have been arranged in a hangar. Among the things to be seen here will be a duplication of the operation of the control tower on the aerodrome, which will give an excellent idea of the manner in which the air traffic to and from the Croydon Aerodrome is handled in actual practice. The working of the meteorological services will also be explained and illustrated, and the Aircraft Operating Company has arranged to give an illustration of the manner in which air survey is carried out by that company. Not the least interesting exhibit on the aerodrome will be the new flood light which, with a strength of four million candle-power, is claimed to produce over the aerodrome the equivalent of 75 per cent. of daylight.

From 4.15 to 4.25 all the Royal Air Force and civilian machines assembled on the aerodrome will take off to return to their home stations, and at 5 p.m. the visitors will depart for London. Tea and light refreshments will be served from 4 p.m. onwards.

Machines to be Shown

Among the machines which will be lined up for inspection on the aerodrome, the following commercial types will be on view: The Armstrong-Whitworth "Argosy" (three Armstrong-Siddeley "Jaguars"); the De Havilland "Hercules" (three Bristol "Jupiters"); the Handley Page W.10 (two Napier "Lions"); the Handley Page W.9 "Hampstead" (three Armstrong-Siddeley "Jaguars"); the Handley Page W.8 F "Hamilton" (one Rolls-Royce "Eagle" and two Siddeley "Pumas"); the Handley Page W.8 B (two Rolls-Royce "Eagles"); the Handley Page "Hamlet" (three Bristol "Lucifers"); the De Havilland 54 "Highclere" (one Rolls-Royce "Condor"); and Sir Alan Cobham's D.H.50 GEBFO (Armstrong-Siddeley "Jaguar") on which he flew to South Africa and back and Australia and back.

The light 'plane class will be represented by two De Havilland "Moths," one with "Cirrus" engine and one with "Genet" engine; the Hawker "Cygnets" (Bristol "Cherub") on which Lieut. Bulman won the *Daily Mail* competition recently, the Bristol "Brownie" ("Cherub"), the Westland "Widgeon" ("Genet"), the Short "Mussel" ("Cirrus"), the Avro "Avian" ("Genet"), and the Blackburn "Bluebird" ("Genet").

The following Service types will be on view: *Single-seater fighters*: Gloster "Grebe" ("Jaguar"), Gloster "Gamecock" ("Jupiter"), Armstrong-Whitworth "Siskin" ("Jaguar"), Hawker "Woodcock" ("Jupiter"), and Sopwith "Snipe" (B.R.2).

Single-engined day bombers: D.H.9A ("Liberty"), Fairey "Fawn" (Napier "Lion"), Fairey "Fox" (Fairey "Felix"), Hawker "Horsley" (Rolls-Royce "Condor").

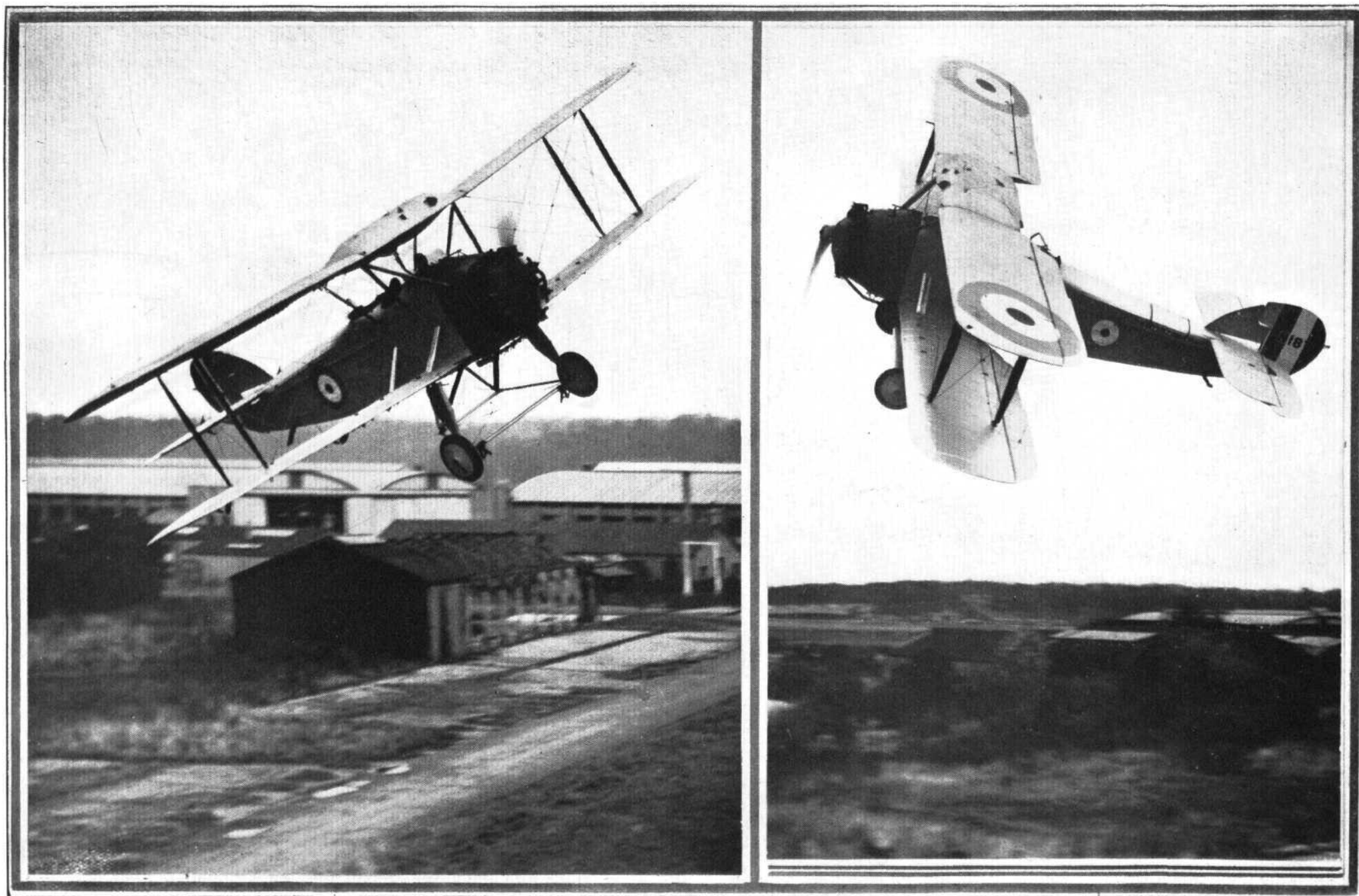
Two-engined night bombers: Vickers "Virginia" (Napier "Lions"), Vickers "Vimy" (Rolls-Royce "Eagles"), Handley Page "Hyderabad" (two "Lions").

Of *Army co-operation* machines only one will be on view, i.e., the good old Bristol Fighter with Rolls-Royce "Falcon" engine.

But a single *troop-carrier* will be shown: the Vickers "Victoria" with two Napier "Lions."

The *Fleet Air Arm* will be represented by the following types: Fairey "Flycatcher" (Armstrong-Siddeley "Jaguar"), The Blackburn "Blackburn" and the Avro "Bison," both gunnery spotters with Napier "Lion" engines, the Fairey III D reconnaissance, also Napier "Lion" and the Blackburn "Dart" torpedo-carrier ("Lion" engine).

Two standard *training types* will be on view, i.e., the Avro 504 K with Gnome Monosoupape engine and the Avro 504 N with Armstrong-Siddeley "Lynx" engine.



GETTING THE NAVY INTO THE AIR: Two Views of the Hawker "Hedgehog" with Bristol "Jupiter Series VI" Engine during a test flight, piloted by Lieut. Bulman, at Brooklands. This machine has been designed as a three-seater reconnaissance and gunnery spotter for use by the Fleet Air Arm.

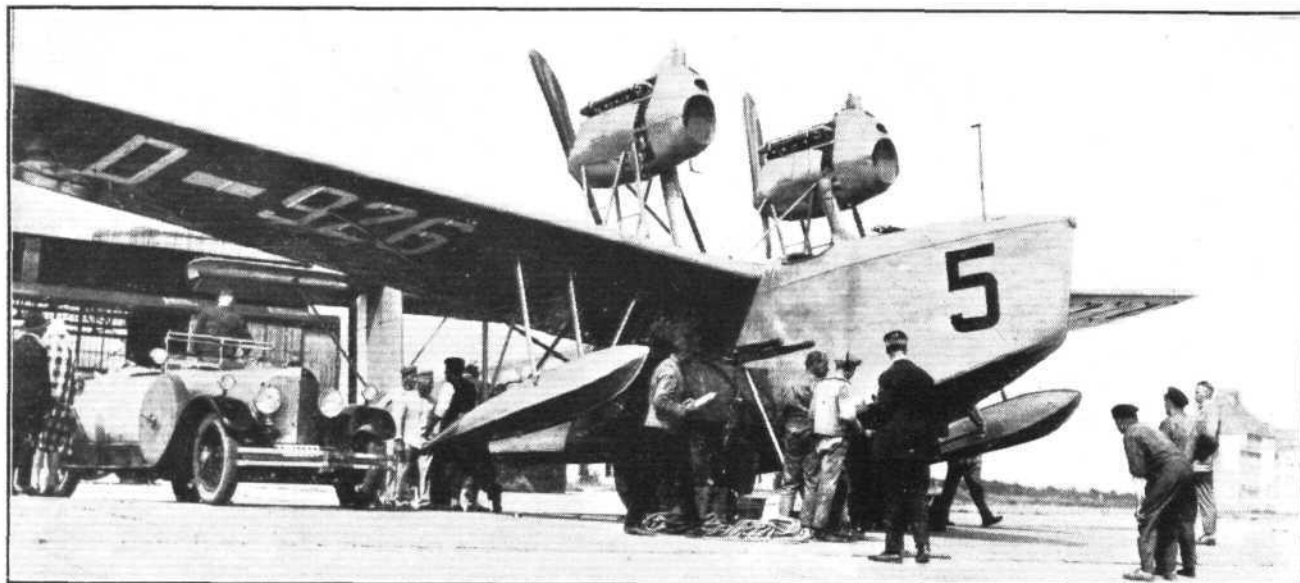
WING LOADING AND WORLD'S RECORDS

Rohrbach Flying Boat Beats Five World's Records

In view of the controversy that has arisen out of the accident to the Sikorsky machine on which it had been intended to fly from New York to Paris, concerning the possibility or otherwise of getting a machine to take off with a wing loading of 21 lbs. per sq. ft., it is interesting to find that recently a German flying boat with a very heavy wing loading indeed not only succeeded in getting off the water, but actually beat five world's records. The machine in question was the Rohrbach

machines should take off and alight in a seaway of magnitude 4 and should also describe figures of 8 on the water, the engines had been put in order and the Rohrbach machines passed the seaworthiness tests extremely well. Having failed to make the coastal flights, however, they could naturally not be considered for the distribution of prizes.

The results obtained at Warnemünde, apart from the disappointment at not being able to take part in the coastal

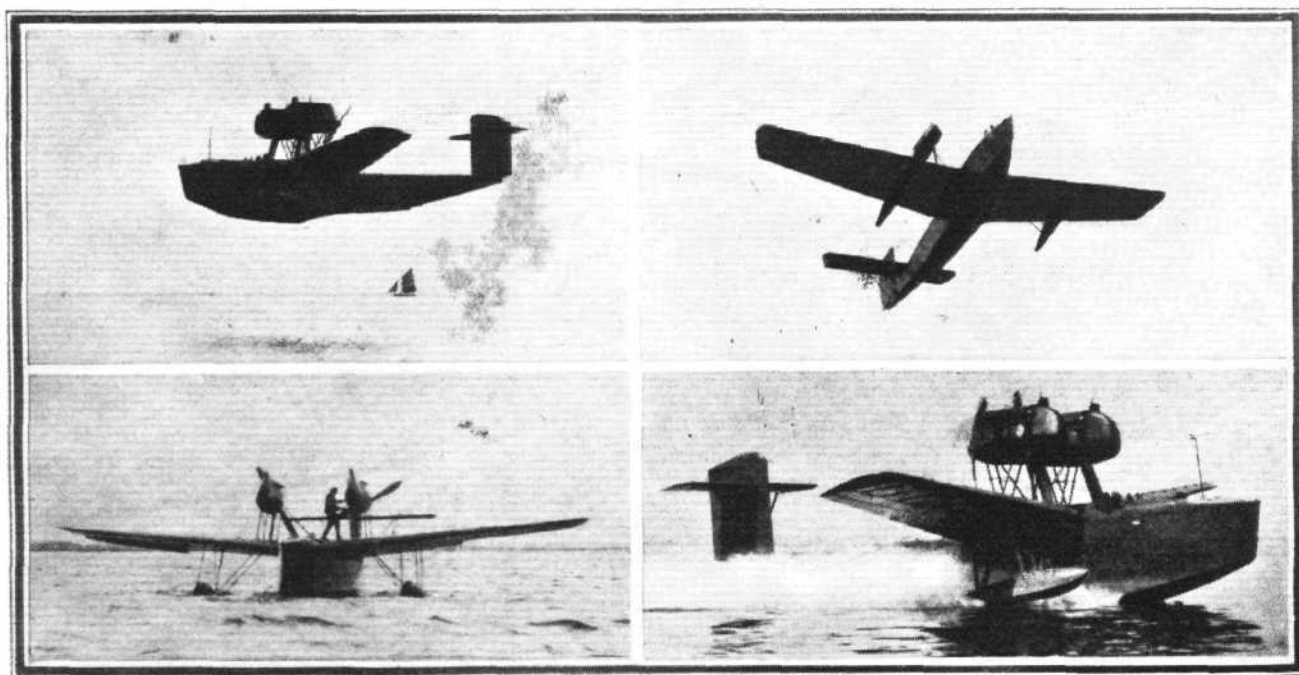


THE ROHRBACH "ROBBE" : Three-quarter front view of the machine on the slipway supported on its beaching trolleys. Note the very deep and narrow hull with perfectly flat sides.

Ro. VII, "Robbe," fitted with two B.M.W. engines of 230 h.p. each.

It may be recollected that the Rohrbach Metall-Flugzeugbau of Berlin had entered two of these machines for the seaplane competition which concluded some little time ago at Warnemünde, but that, through various engine troubles, etc., the machines were prevented from taking part in certain sections of the competition, particularly in the long-distance coastal flights. By the time the competition had reached the stage of the seaworthiness tests, for which it was prescribed that

flights, were so encouraging that the Rohrbach Company decided to put one of these machines through an attempt to beat a few of the existing world's records, and consequently the Copenhagen branch of the company proceeded to put the machine in shape for officially observed record attempts. The result was that the Ro. VII established five new world's records, which have now been homologated by the F.A.I. It may be mentioned that one of these was previously held by the United States of America, the other four by the Dornier Company of Friedrichshafen. Thus the very old



FOUR VIEWS OF THE ROHRBACH "ROBBE" : This machine has just established five new world's records. Its wing loading is 17.15 lbs. per square foot. In the view of the machine taxiing, the tail is seen to be well clear of the spray. The hull has a pronounced vee bottom.

rivalry between Dornier and Rohrbach is still going on, and at the moment, so far as these particular records are concerned, at any rate, Dr. Rohrbach is on top.

The five new records established by the Ro. VII were as follows:—

(1) Speed over a distance of 100 kilometres (62 miles), with useful load of 500 kg. (1,100 lb.), 186 kilometres per hour (115 m.p.h.). (2) Speed over 500 kilom. (311 miles), with a useful load of 500 kg., 180 kilometres per hour (112 m.p.h.). (3) Speed over 100 kilometres with useful load of 1,000 kg. (2,200 lbs.), 186 kilometres per hour (115 m.p.h.). (4) Speed over 500 kilometres with useful load of 1,000 kg., 180 kilometres per hour (112 m.p.h.). (5) Distance with useful load of 1,000 kg. (2,200 lbs.), 518 kilometres (322 miles).

Not completely satisfied with this performance the company experimented with propellers and succeeded in finding a pair which suited the machine better. With these propellers even better results were obtained, although naturally these do not count as world's records, not having been officially observed by representatives of the F.A.I. The performances have, however, been observed and confirmed by the Deutsche Versuchsanstalt für Luftfahrt E.V. On this occasion the useful load was 1,250 kg. (2,750 lbs.). Take off in 12 to 15 secs. Horizontal speed at sea level, using normal engine controls, 201 km./h. (124.8 m.p.h.). Horizontal speed at sea level, using altitude control 217 km./h. (134.8 m.p.h.). Climb from 1,000 to 2,000 metres in 6 mins.

The Machine

In view of these rather extraordinary performances a few particulars of the Rohrbach Ro. VII may not be without interest. Generally speaking, the machine resembles the large flying boat for which the Beardmore Company hold the British rights in this country, and of which specimens are being built at Dalmuir. There are, however, very consider-

able differences in size as well as in power between the two types. Thus, the Ro. VII has for its power plant two B.M.W. engines of 230 h.p. each. The monoplane wing is considerably smaller than that of the older machine, and it is interesting to find that in the latest type, Dr. Rohrbach has chosen tapering wings. It may be recollected that in the older machine the wings are of uniform chord and section from root to tip. In the new machine the wing tapers both in plan and section. All-metal construction of similar form to that employed in the older type has been retained, but it is interesting to find that the hull of the latest type has a very pronounced "V" bottom, especially in front of the main step. Outboard floats are still fitted for the purpose of rendering the machine stable on the water, this being particularly necessary in this machine, the main hull of which is of relatively narrow beam although very deep, while the placing of the engines a considerable distance above the wing, naturally gives the machine a fairly high centre of gravity. The Ro. VII can be supplied as a civil machine in which case the boat hull gives accommodation for six passengers, in addition to the pilot and engineer. The main dimensions, etc., of the Rohrbach Ro. VII are:—

Length, o.a., 13.2 m. (43 ft. 4 in.), wing span, 17.4 m. (56 ft. 2 in.); wing area, 40 sq. m. (431 sq. ft.); weight of machine, empty, 2,000 kg. (4,400 lbs.), load, 1,360 kg. (2,990 lbs.); total loaded weight, 3,360 kg. (7,390 lbs.); wing loading, 84 kg. per square metre (17.15 lbs. per sq. ft.); power loading, 7.3 kg. per h.p. (16 lbs. per h.p.); "wing power," 11.5 kg. per sq. m. (1.07 h.p. per sq. ft.); range, 1,200 kilom. (745 miles); presumably this range is only attained when all the disposable load is in the form of petrol. The machine is reported to cruise at 150 km. per hour (93 m.p.h.), and to have a landing speed of 116 km. per hour (72 m.p.h.).

It will be seen that the wing loading is exceptionally high, the more so as the power loading is by no means low.

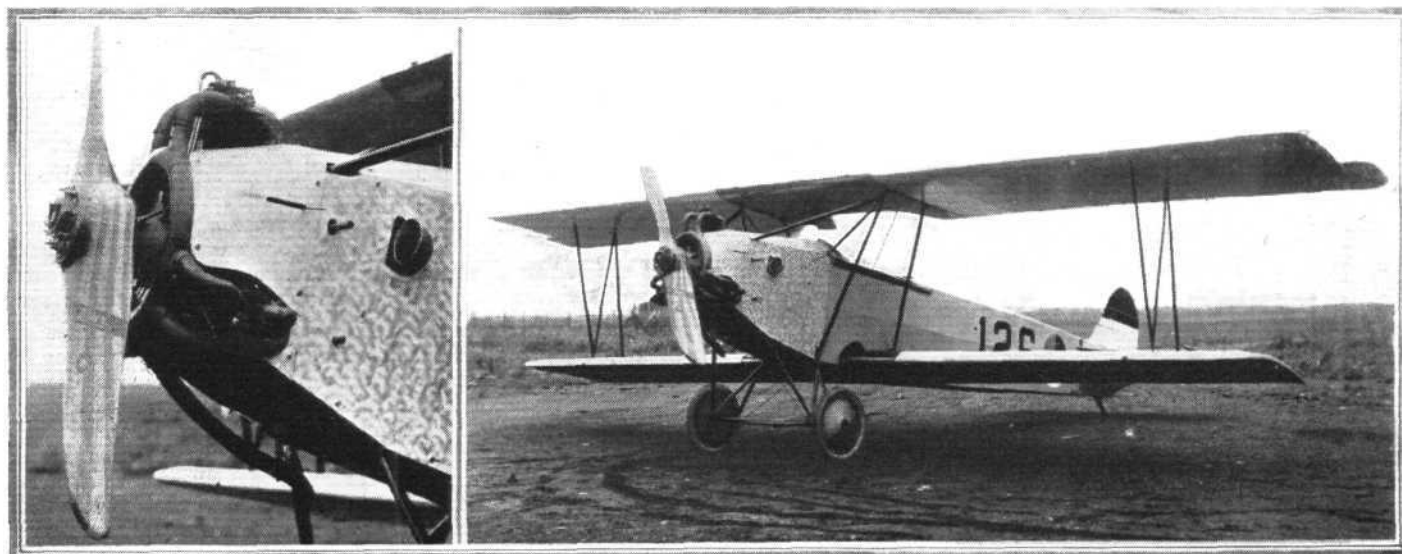
Sir Alan Cobham and the Kiddies

SIR ALAN COBHAM received a tremendous reception at the Royal Albert Hall last Saturday when he told the story of his flight to thousands of schoolgirls and schoolboys, who filled the great hall almost to overflowing. This grand treat, which was obviously thoroughly enjoyed, was arranged by the *Daily Mail*, and whilst waiting for Sir Alan, the young guests were kept amused by the band of the Royal Air Force, songs by Miss Carrie Tubb, and cinematograph films. Mr. Stanley M. Bruce, Prime Minister of Australia, was also present, and made his first public speech since his arrival in London, when he gave a short address to the children. At the conclusion of Sir Alan's lecture, which was illustrated by lantern slides, the youngsters cheered until they were hoarse, and concluded with "For He's a Jolly Good Fellow." As a souvenir of the occasion each child was presented with a cardboard model of the D.H.50 J seaplane.

The A. Keene Aerial Benefit

WE wish to draw the attention of FLIGHT readers to a

Special Aerial Display and Grand Concert, which the Southern Counties Aviation Co., of Brooklands, are getting up for the benefit of the widow and children of the late Mr. A. Keene, who was killed when flying as mechanic in the aeroplane accident at Leatherhead last month. The flying display will take place at the Crystal Palace on October 27, at 2.45 p.m., when several aeroplanes will give demonstrations of stunt flying, looping, etc., after which, at 3.30 p.m., a concert will be given by West End artists. Tickets, from 1s. to 5s., may be obtained from the Crystal Palace; G. V. Peck, Southern Counties Aviation Co., Brooklands; or from R. H. Squire, 98-99, Jermyn Street, W.1. It is hoped that owners or pilots of aeroplanes will, if possible, come along and assist in the programme of flying—if they are willing to do so, will they please communicate with Mr. Peck, as above? Also, even if any of our readers are unable to attend, perhaps they will nevertheless buy a ticket, and so assist a worthy cause. Donations for Mrs. Keene's Benefit Fund should be addressed to: General Manager, Crystal Palace, S.E.19.



A FOKKER-"JUPITER" COMBINATION: The latest Fokker School machine which, fitted with a 120 h.p. Bristol "Lucifer," 3-cyl. air-cooled engine, has given very satisfactory results.

ANOTHER AUSTRALIAN FLIGHT

Visit to South Sea Islands

By Major F. A. De V. ROBERTSON, V.D.

*"And its twenty thousand mile to our little lazy isle
Where the trumpet orchids blow."—Kipling*

WHILE Sir Alan Cobham has done more than any other man to popularise the aeroplane as a medium of long-distance travel, we ought not to forget the efforts made by other Britons in the same direction, though for various reasons they have not received an equal amount of publicity. The four long flights by the Royal Air Force immediately come to mind, namely, the journey of the four Fairey machines from Cairo to the Cape and back to England; the journey of the D.H.9A bombers from Cairo to Kano in Nigeria and back; the visit of the Southampton flying boats to the Levant; and the trip of the Vickers machines from Cairo to Aden and back.

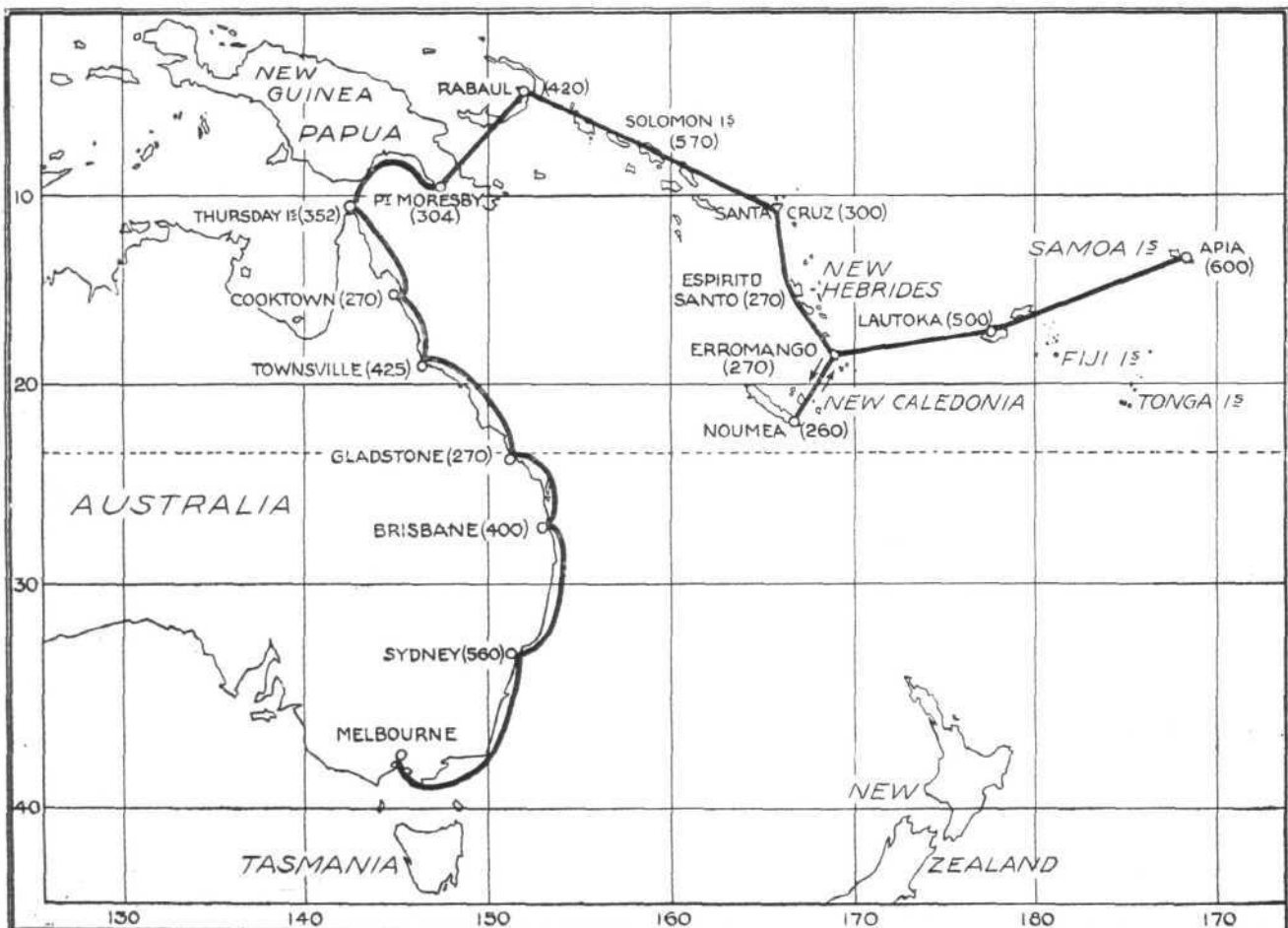
Meantime Britons in Australia have not been idle. The great flights by Australians in the past three years have been every whit as creditable and deserve just as much notice. In fact, the Royal Australian Air Force actually set the example to the Royal Air Force. On April 6, 1924, Wing Commander S. J. Goble, C.B.E., D.S.O., D.S.C., then chief of the Australian Air Staff, set out in a Fairey 3D seaplane with Rolls Royce Eagle engine, piloted by Flight Lieutenant I. E. McIntyre, C.B.E., A.F.C., to fly right round the coast of Australia. The distance was roughly 8,500 miles, and it was accomplished in 44 days. For this feat both officers received the C.B.E., and the Britannia Trophy was awarded to the pilot. Wing Commander Goble is now Australian Liaison Officer at the Air Ministry, and we much regret to hear that he has just had to undergo an operation for appendicitis in the R.A.F. hospital at Halton. We wish him a speedy recovery and a restoration to complete health—all the more so because his

illness is attributed to the effects of the hardships which he underwent on his famous flight.

The second Australian effort was civilian. Colonel H. C. Brinsmead, O.B.E., M.C., Controller of Civil Aviation, in the same year undertook a flight of 7,658 miles round the interior of Australia in a D.H.50 with Puma engine. The pilot was Captain E. J. Jones, M.C., D.F.C., and Mr. R. H. Buchanan accompanied them as mechanic. They started from Melbourne on August 7, 1924, and returned on August 29 after a flight of 22 days.

The latest effort by the R.A.A.F. commenced on September 25 last, when the present Chief of the Australian Air Staff, Group-Captain R. Williams, D.S.O., O.B.E., left Melbourne in a D.H.50 (previous reports stated in error that the machine was a Supermarine "Seagull"—Ed.) with floats (Puma engine) to explore the South Sea islands. Naturally, the pilot whom he chose was Flight-Lieut. McIntyre who had proved his exceptional merit at this sort of work in the Goble flight. They are accompanied by Flight-Sergt. Trist as mechanic. The seaplane which they are using is probably the one ordered by the R.A.A.F. for the special use of the Governor-General H. E. Lord Stonehaven, which has Duralumin floats designed and made by Short Bros., of Rochester, though wheels can be substituted at short notice.

The South Sea islands always suggest romance. Australia and New Zealand are British and we have come to regard everything British as Twentieth Century and, therefore, commonplace. It is rather an effort to realise that the palm-fringed atolls of the South Seas, peopled in our imaginations by beach-combers and lovely Kanaka maidens, are part of the Australasian geographical system. A comprehensive tour of these islands would mean crossing many stretches of



SURVEYING THE PACIFIC ISLANDS FROM THE AIR: Sketch map showing the route over which Group-Capt. R. Williams, of the R.A.A.F., is making his survey of the South Sea Islands in a D.H. 50 seaplane. The flight home will probably follow the same route. The approximate distance between each port of call is given above in nautical miles

open ocean, often for hundreds of miles at a time. The visits of steamers to any one of the islands must always be rare events. Yet, from the defence point of view, the two great British Dominions of the southern Pacific must be very much interested in these islands. And, as Australia knows that her defence system must be based on marine aircraft, it is particularly important that the R.A.A.F. should have as much knowledge of the islands as possible from the aerial point of view. There is yet another consideration. It is only by means of the air that these islands can ever hope for anything like adequate communications with the outside world. Archipelagoes are in a peculiar position in that they never can obtain all the communications which they really need so long as they depend on sea-going ships. Shipping is too expensive. Aircraft alone offers a solution of the difficulty, because it is cheaper—although, here in Europe we have come to think of air transport as unreasonably costly. In Australia they know better. Consequently, this pioneer flight of Group-Capt. Williams may have far-reaching consequences. He is showing the flag, and we know that trade often follows the flag.

Full details of the route have not yet been received in London, but the following itinerary is probably pretty correct. The miles given are nautical miles, and one-eighth should be added to translate them into land miles.

It is possible also that a visit may be paid to Nukualofa, in the Tonga or Friendly Islands before starting back from Samoa. On the return journey, most probably there would

not be a second diversion from Erromango to visit the French islands of New Caledonia. Therefore, we may provisionally put the whole route down as about 11,600 sea miles. It is a great and adventurous undertaking, and we wish the best of luck to the gallant Australian airmen who are engaged upon it.

	Nautical Miles.
Melbourne	—
Sydney	560
Brisbane	400
Gladstone	270
Townsville	425
Cooktown	270
Thursday Is.	352
Port Moresby (Papua)	304
Rabaul (Bismarck Arch.)	420
Down the Solomon Isles	570
Santa Cruz	300
Esperito Santo (New Hebrides)	270
Erromango	270
Noumea, New Caledonia (French)	260
Erromango	260
Lautoka, Fiji	500
Apia, in Opolu Is., Samoa (via Keppel Island)	600
	6,031

AIRCRAFT ALIGHTING AND ARRESTING MECHANISMS

SINCE the early days of flying, when a length of rubber cord wrapped around skid and axle of an aeroplane undercarriage formed the accepted means of absorbing the shocks of landing, a great deal of progress has been made in the design of undercarriages. The type which has come to be almost universally used is the oleo "leg" in one form or another, and this type has the advantage of being relatively simple both to design and construct.

Nevertheless, there are still problems to be solved and improvements to be made, and the paper entitled "Aircraft Alighting and Arresting Mechanisms," which is to be read before the Institution of Aeronautical Engineers on October 26, by Mr. G. H. Dowty, A.F.R.Ae.S., M.I.Ae.E., should prove of considerable interest to practical engineers, the more so as Mr. Dowty will deal not only with the design of aircraft undercarriages, but also with the rather more difficult problems of "arrester gears."

It may be recollected that in the June 24, 1926, issue of *The Aircraft Engineer* Mr. Dowty gave an illustrated article on compression rubbers, in which he gave summarised results of tests of various rubbers. Some four years ago Mr. Dowty read a paper before the Inst. Ae. E. on oleo undercarriages, so that his subject on October 26 is one of which he has had very considerable experience.

In his paper Mr. Dowty will deal mainly with the type of oleo undercarriage, in which the "legs" have been designed to give uniform resistance throughout, and more particularly the type employing a tapered needle valve for controlling the resistance to compression. The lecturer will show illustrations of such a leg, and will give formulæ, tables and charts for the rapid determination of the proportions of the various members in order to give uniform resistance, assuming only that the weight of the aircraft and the vertical velocity

permitted are given. The lecturer has managed to evolve a very simple method for making these calculations for a leg of the needle valve controlled type.

If the first part of Mr. Dowty's paper is of great interest to all whose work lies in aircraft drawing offices, the second part of the paper should have a much wider appeal, since it deals with the problems of aircraft "arrester gears," i.e., a mechanism for pulling up a landing aircraft in a short distance. Mr. Dowty points out that at present no such arrester gear is used for deck landing, and that consequently only machines of relatively low landing speed can be used. He then proceeds to call attention to the advantages, not only for deck landing, but for army aeroplanes and commercial aircraft, of being able to alight in fairly confined spaces. Mr. Dowty, basing his design upon the familiar hydraulic buffers used on railway platforms, evolves a mechanism doing the same for aircraft, but in which the travel is relatively long and the resistance small.

It is not proposed to rob Mr. Dowty's lecture of its interest by giving too much detail in advance, but we may say that the paper refers to an arrester gear claimed to be capable of bringing to rest in a distance of 300 ft., a machine landing at 90 m.p.h. As the distance available for landing on decks is 600 ft., aircraft with landing speeds as high as those of modern racing aircraft could be landed on a deck. This claim is sufficiently bold to make one "sit up and take notice," and Mr. Dowty's lecture deserves to be extremely well attended.

The meeting will commence at 6.30 p.m., on Tuesday, October 26, and will be held in the lecture room of the Junior Institution of Engineers, 39, Victoria Street, London, S.W. 1. We understand that non-members of the Institution will be welcomed.

Changes on Royal Aero Club Committee

IN view of the increasing work of the Aircraft Operating Co., Ltd., Maj. H. Hemming, A.F.C., has been obliged to retire from the Committees of the Royal Aero Club. For several months Maj. Hemming has devoted considerable time to the Club Committee and the Racing Committee. Sir Alan J. Cobham has accepted the invitation of the Royal Aero Club to fill the vacancy on the Committee.

Royal Aeronautical Society

The Council of the Royal Aeronautical Society have decided to hold a reception on Monday, October 25, at 8.30 p.m. in the King Edward VII Rooms, Hotel Victoria, Northumberland Avenue, W.C.2, at which Sir Alan Cobham, K.B.E., will give an address, illustrated by lantern slides, on his recent flight.

The Dominion Premiers and other delegates to the Imperial Conference will be present. The R.A.F. String Band will play, and a buffet will be provided. Ladies may be invited, and tickets, price 5s. each, may be obtained by members for themselves and their guests from the Secretary, Royal Aeronautical Society, 7, Albemarle Street, W.1.

Aero Golfing Society

THE autumn meeting was held at Wentworth Park Golf Club, Virginia Water, on October 14.

Challenge Cup (presented by the proprietors of *FLIGHT*):—
(1) H. E. Perrin, 90 less 14 = 76; (2) P. Barry, 84 less 7 = 77.

Challenge Cup (presented by Cellon, Ltd., Richmond):—
(1) E. J. B. How, 1 up.

C. Ruault and W. A. Bristow tied for second place—all square.

U.S. AIR MAIL SERVICES

Offshoots from the Transcontinental Route

Note.—In our issue for June 10 we gave a list of the ten Contract Air Mail Services which have been entered into by the U.S. Post Office Department, consequent upon the decision to extend the U.S. Air Mail Services beyond that of the original Transcontinental route, which has been in successful operation for some years. This week we give

Walter T. Varney, one of America's pioneer pilots of nine years' standing, who has flown over 1,000,000 miles with only two serious crashes and not a single fatality or injury to pilot or passenger recorded against him.

This service enables Seattle, Portland, Tacoma, Spokane, and all north-western cities to be brought within practically



U.S. AIR MAIL SERVICES. C.A.M. No. 5.—One of the Wright "Whirlwind" engine "Swallows" now used on the Elko-Pasco route operated by Walter T. Varney.

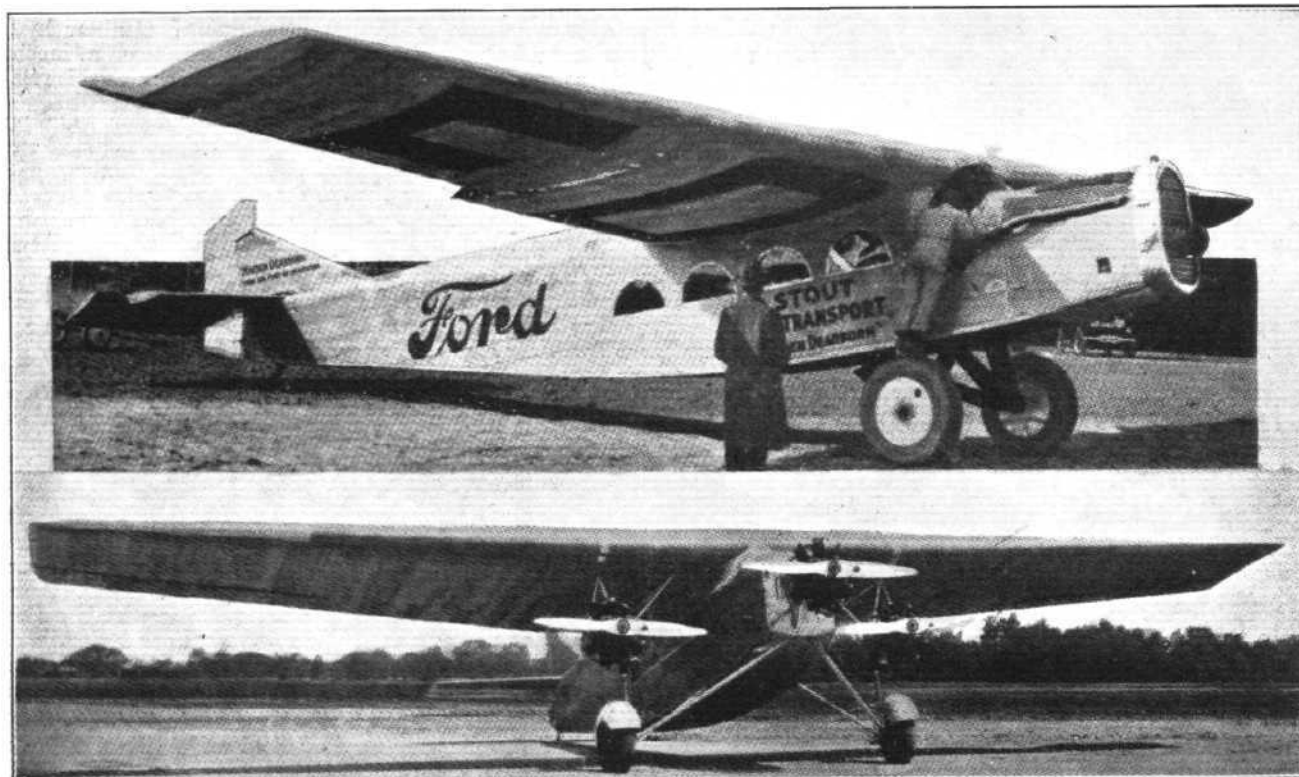
brief particulars of some of these new C.A.M. Services, and in following issues we will continue our reports on the other routes. Other articles on this subject appeared in FLIGHT for June 17 and July 1 last.

C.A.M. No. 5.—Elko-Pasco (430 miles)

The contract for the Air Mail Service between Elko, Nev. (on the Transcontinental route), and Pasco, Wash., via Boise, a distance of about 430 miles, was obtained by

40 hours of New York. A letter mailed from any north-western city at 6 p.m. is taken overnight by mail train to Pasco, transferred to the mail 'plane, and arrives at Elko at 11 a.m. Thence it goes via the Transcontinental route to all points east or west; the eastbound 'plane arrives at Chicago at 8 a.m. the following morning, first delivery, and midday and afternoon to points as far distant as St. Louis and St. Paul.

This route, which entails flying over very difficult country,



U.S. AIR MAIL SERVICES. C.A.M. Nos. 6 and 7. The machine at the top is one of the single-engine (Liberty) Ford-Stout all-metal monoplanes employed at the start on the two air mail routes (Detroit-Cleveland and Detroit-Chicago) operated by the Ford Air Transport. For the future three-engine (Wright "Whirlwind") Ford-Stout all-metal monoplanes, as shown in the lower photograph, will be used.

was inaugurated on April 6 last. The first 'plane to leave Elko on this date, piloted by F. Rose, had to land in "wild" country on Juniper Mountain (65 miles south of Jordan Valley) during a storm, and some time elapsed before any news of him was received at headquarters.

The machines employed at first were six "Swallow" biplanes, specially designed for air mail service, fitted with Curtiss C.6 engines. After a few days' operation, however, it was found that these engines were hardly powerful enough for the difficult journey, and so, with the consent of the Post Office Department, the service was suspended for several weeks to enable more powerful engines being installed. Eventually 200 h.p. Wright "Whirlwind" engines were fitted to the 'planes, and the service once again got going without further trouble.

Each of the three aerodromes—Elko, Boise, and Pasco—are equipped with wireless, in order that the pilots of the machines may be in constant touch with the ground, and weather reports, etc., are reported at intervals. The schedule provides for a daily service each way, pilots and machines being changed at Boise in each direction.

C.A.M. Nos. 6-7—Detroit-Cleveland (100 miles); Detroit-Chicago (250 miles)

These two routes, which connect respectively Detroit with Cleveland and Chicago, were the first contract air-mail routes to be opened in America. Both C.A.M. No. 6 and C.A.M. No. 7 are operated by the aviation branch of the Ford Motor Co., of Dearborn, Mich., of which Mr. Henry Ford and Mr. Edsel Ford are the moving spirits. The Ford Air Transport concern actually started operations in the aerial transport of passengers and freight in April of last year, but the contract

air mail services run by them were inaugurated on February 15 this year, when the first machine "Maiden Dearborn I" was dispatched, before a representative gathering, with mail from the Dearborn Airport, Detroit, for Cleveland. Shortly after a machine left for Chicago, a second machine having meanwhile left Chicago for Detroit. The journey from Cleveland to Detroit was made by "Maiden Dearborn I" on its return trip.

These two routes serve to link up Detroit, *via* the Trans-continental route, with New York (8 hours) to the east, and San Francisco (26 hours) to the west. The journey to Chicago takes 4 hours, and to Cleveland 3 hours. Mail for Cleveland, New York, and eastern points close daily (Sundays excepted) at 9.50 a.m., and mail for Chicago, San Francisco and western points at 2.25 p.m.

At first the machines used on these two services were the Ford-Stout all-metal monoplanes, of the high-wing cantilever type, fitted with Liberty engines. It was decided later, however, to standardise on multi-engined machines in order to reduce, as far as possible, the hazard of engine trouble. A new all-metal monoplane, provided with three engines, was therefore produced by the Ford-Stout concern for use on the two air mail routes.

These machines are also of the high-wing cantilever type, and the engines fitted are 200 h.p. Wright "Whirlwind" air-cooled radials.

The schedules for these two services are as follows: C.A.M. 6.—Detroit dep., 10.40 a.m. (E.T.), Cleveland arr., 12.10 p.m. (E.T.); Cleveland dep., 3.45 p.m. (E.T.), Detroit arr., 5.15 p.m. (E.T.). C.A.M. 7.—Detroit dep., 3.15 p.m. (E.T.), Chicago arr., 5 p.m. (C.T.); Chicago dep., 8 a.m. (C.T.), Detroit arr., 11.40 a.m. (E.T.).

THE ROYAL AIR FORCE MEMORIAL FUND

THE fifth meeting of the current year of the Executive Committee of this Fund was held at Iddesleigh House, on October 13. Lord Hugh Cecil, P.C., M.P., was in the chair, and there was a large attendance of members of the committee.

It was reported that the thirty-eight boys in attendance at Vanbrugh Castle School, Blackheath, had re-assembled for the winter term on September 7.

With regard to the activities of the Grants Sub-Committee, it was reported that that committee, and the secretary, in the nine weeks which elapsed since the last meeting of the executive committee, have dealt with no less than 223 cases of appeals for assistance, and in nearly all these cases financial assistance has been granted to the applicants.

With regard to the forthcoming celebration of the Armistice, which it is understood will be held on Thursday, November 11 next, the committee decided unanimously to continue the custom of laying a wreath, provided by the Fund, at the foot of the R.A.F. War Memorial on the Victoria Embankment, and this ceremony will again be very kindly performed, on behalf of the committee, by Air Chief Marshal Sir Hugh Trenchard, Bart., G.C.B., and all relatives and friends of the Royal Air Force are invited to be present at the ceremony,

which will only last a few minutes, and will probably follow the official ceremony for the three services at the Cenotaph. Further notifications regarding the matter will appear in the Press shortly.

The next meeting of the executive committee as arranged will take place at the offices of the Fund on December 15 next.

Queen of Belgium's Flight in Ambulance 'Plane

It is well known that the King and Queen of Belgium are both enthusiastic aviators—King Albert owning his own Bristol aeroplane. Queen Elizabeth has just given a remarkable demonstration of her keenness in aviation matters, when inspecting an exhibition of the work of French ambulance 'planes which was held at Evers aerodrome, near Brussels, on October 17. Her Majesty was greatly interested in one of these ambulance 'planes, and in order to test for herself the comfort of transportation in such a machine, she took her place in one of the stretchers and made a flight, lasting half an hour, over Brussels. King Albert witnessed the flight. We reproduce below a photograph showing the Queen in the machine, taken just before the start.



A Queen in an Ambulance 'Plane: Queen Elizabeth of Belgium made a flight over Brussels in an ambulance 'plane on October 17.

FROM THE FOUR WINDS

Prague International Aero Exhibition

It has been decided to hold a large international aero exhibition at Prague in the summer of next year. Previous exhibitions at Prague have been very successful and interesting, and it is anticipated that the 1927 exhibition will be more attractive than ever.

And Another in Berlin

It is also proposed to hold an international aero show in Berlin, at the Kaiserdamm Exhibition ground, either in the autumn of 1927 or spring of 1928.

The New Zeppelin "L.Z. 127"

THE following particulars may be of interest concerning the proposed rigid Zeppelin airship "L.Z. 127," which, as reported in FLIGHT some little while back, is to be constructed from funds collected through an appeal to the people of Germany. This airship, which will be employed in carrying out experiments with a view to the establishment of a Transatlantic air line, will have a capacity of 105,000 cub. m. (3,700,000 cub. ft.), and will thus be considerably larger than the "L.Z. 126" ("Los Angeles"), which had a capacity of 70,000 cub. m. (2,470,000 cub. ft.). It will be propelled by five 420 h.p. Maybach engines, and will probably be completed by the end of 1927. According to some reports it is stated that Dr. Lempertz, the chief chemist of the Zeppelin Co., has discovered a gas, having approximately the same specific gravity as air, which it is claimed can be used as fuel in place of petrol, with very successful results; this gas is said to develop 25 per cent. more calories per cub. m. than 1 kg. of petrol. Only a slight modification of the carburettor is necessary for the employment of this gas, which will be carried in special gas cells.

Additional U.S. Air Mail Routes

SEVERAL new air mail routes, in addition to the ten C.A.M. services already sanctioned by the U.S. Post Office, have been awarded to contractors, or put up to tender. Of these may be mentioned the Washington-Philadelphia route, operated by the Philadelphia Rapid Transit Air Service, the Cheyenne-Pueblo route, operated by Colorado Airways, Inc., and the Cleveland-Pittsburg route, operated by Clifford Ball. The following air mail routes have been put up to tender:—Cleveland-Louisville; Detroit-Grand Rapids; Seattle-Victoria; New Orleans-Pilotown.

"Avia" Machines for Belgium

ONE of the "Avia B.H. 21" single-seater fighters constructed by the Czechoslovak firm of Milos Bondy, and fitted with a 300 h.p. Hispano Suiza engine, manufactured by the Czech Skoda Works, was recently sold to the Belgian Government. It is reported that a series of these machines will be manufactured, under licence, in Belgium.

A New Italian Aero Engine

A SUCCESSFUL 150 hours' flying test was carried out last summer at Sesto Calende with the new "Asso" aero engine built by the Isotta Fraschini firm. The engine, which develops 500 h.p., was fitted to a Savoia S.16 ter flying boat, and after two six-hour tests and climb and load tests, the machine was flown daily for a fortnight, from 7 a.m. to 1 p.m. and from 2 to 7 p.m. (10 hours). As the average speed for these tests was 180 k.p.h. (112 m.p.h.) the total distance covered was about 27,000 km. (16,780 miles).

The Brothers Arrachart Crash

CAPT. and Adj. Arrachart, who recently made an unsuccessful attempt at beating the world's record for non-stop flight in a straight line, when they made a forced landing at Ekaterinenburg (or Sverdlovsk), crashed on October 12 when starting on the flight home. Capt. Arrachart injured his knee, whilst his brother broke a rib.

Tunis-Antibes Air Service

It is hoped that as soon as the air port at Tunis is completed an air service will be operated by the Compagnie Aero Navale, connecting Tunis with France. The service will be worked by seaplanes fitted with 400-h.p. engines, and it is expected that the journey from Tunis to Antibes, via Ajaccio, will be completed in six hours, with another six hours to Paris.

"Los Angeles" Out Again

THE U.S. Navy rigid airship "Los Angeles" (LZ 126) made a flight on October 15 from Lakehurst, N.J., to Detroit, in 16 hrs. 23 mins.

Australian Missionary's "Moth"

THE Rev. C. Daniels, whose parish at Wilconnia (New South Wales) is as large as England, has found visiting his congregation by means of motor car a somewhat lengthy proceeding. During his stay in England, therefore, he is

trying to arrange for the purchase of a D.H. "Moth" which he will take back with him to Australia and thus be able to "round up" his flock in no time. Mr. Daniels was formerly a pilot in the R.A.F.

Quebec Looks Ahead for Power

THE forward policy of the Quebec Government in investigating its power sites in advance of requirements is drawn to public notice by the return to the base at Three Rivers of the hydroplane of Canadian Airways, Ltd., from their photographic survey of the great falls on McLean River in the newer portion of the province called Ungava. The McLean falls have a sheer drop of 302 ft. and with heavy rapids give a total drop of approximately 800 ft. The estimated horse-power of the falls is 120,000, and of the total fall for a distance of 12 miles is 300,000. The airmen report that excellent photographs demonstrating the possibilities of hydro-electric developments have been forwarded to the Minister of Lands and Forests, for whose department the survey was made.

Canoes by Aeroplane

GOOD use is being made of the air services by prospectors journeying into the remote parts of Northern Ontario to search for gold. So much so that one of the companies operating a "gold rush" air service is providing a machine which will carry two canoes—the canoe forming an all-important item of the gold-seeker's equipment.

Italy-Brazil by Seaplane

ON October 17, Senhor de Barros, a Brazilian pilot, accompanied by Capt. Braga, Sen. Cunha, and a mechanic, left Genoa for Gibraltar in a seaplane, with the object of flying to Santos, in Brazil.

The Bristol "Cherub" Abroad

THE Bristol Aeroplane Co. have recently received a communication from Herr Eberhard von Conta from Rome informing them that he had completed a trip of 1,600 kms. in his Messerschmitt Monoplane fitted with the Bristol "Cherub" Series III engine in 14 hrs. 20 mins. from Bamberg to Rome, his line of route being over Brixen, Klagenfurt, Bologna and Florence. The crossing of the Alps was effected at a height of 14,000 ft. Although this brief message contained no mention of the fact, it was understood from Herr von Conta before the flight commenced that a passenger was to be carried in the machine. This flight is certain a remarkably fine performance for an engine of the capacity of the "Cherub" to have carried out so satisfactorily, and it is an indication of the pilot's appreciation of the Cherub's qualities that the engine had already completed 65 hours' running without the changing of a plug before this trans-Alpine flight was commenced.

Captured R.A.F. Airmen Released by Arabs

FLYING-OFFICER F. M. DENNY and Aircraftsman Hirst, No. 30 (Bombing) Squadron, Royal Air Force, who were captured by Sheikh Mahmud last June, returned to the British lines on October 8 in charge of a strong escort of the Sheikh's warlike Kurds. An exchange of prisoners had been made in a remote mountain village, 40 miles south-east of Sulaimania. Both airmen looked well and said that their captor had done his best to make them comfortable, although kept under strong guard, living in a mud hut and eating Kurdish food all the time.

Airship Development Work

IN connection with the Airship Development Programme, it is hoped to carry out at an early date some experiments with R.33 in dropping aeroplanes. It may be remembered that last year a D.H.53 light 'plane was successfully dropped and again attached. The new experiments will be more ambitious in that two machines will be carried, and will be high-power single-seater fighters (Gloster "Grebes"). Tests are also about to be carried out on parachutes modified to suit airship conditions, in which the crew have to move about the hull and cannot constantly wear both harness and parachute as is done on heavier-than-air craft. Yet a third set of experiments will consist in determining the accuracy with which the height of an airship can be determined from a timing of the echo of small explosives fired from the airship. It will be recalled that one of our early rigid airships successfully launched a Sopwith "Camel" as far back as 1919.

Changes at Hawkers

MR. T. S. SPRIGGS, director and secretary of the H. G. Hawker Engineering Co., Ltd., has been appointed General Manager, and Mr. H. Chandler has been promoted to Secretary. Congratulations to all concerned!

THE ROYAL AIR FORCE

London Gazette, October 12, 1926.
General Duties Branch

H. Broadhurst is granted a short-service commission as a Pilot Officer on probation, with effect from and with seniority of October 1. The follg. Pilot Officers are promoted to rank of Flying Officer:—N. S. Little (Aug. 16); E. L. Drew (Aug. 17); G. P. Mee (Sept. 6); P. B. Chubb (Sept. 6); D. C. Shaw (Sept. 17). The follg. Pilot Officers on probation are confirmed in rank:—J. McGuinness, G. E. Campbell, D.F.M., A. H. Owen (Sept. 1); M. A. Cowan (Sept. 10); J. H. Harris (Sept. 13); Pilot Officer J. C. H. Tavendale takes rank and prec. as if his appt. as Pilot Officer bore date Dec. 17, 1924, immediately follg. Pilot Officer J. G. Franks on the gradation list. Reduction to take effect from Aug. 23. Pilot Officer M. H. Frame resigns his short-service commn. (Oct. 4).

Stores Branch

Flying Officer J. E. Truss, M.C., is granted a permanent commn. in this rank (Oct. 13); Flying Officer C. S. Whellock is transf'd. to Stores Branch on probn. in this rank, with effect from and with seny. of Oct. 1; Flight Lieut. E. R. Webb relinquishes his short-service commn. on acct. of ill-health, and is permitted to retain his rank (Oct. 10).

Medical Branch

Sqdn. Leader B. F. Beaton, D.T.M., is placed on ret'd. list at his own request (Oct. 13); Flight Lieut. H. R. Peek (tempy. Capt. Army Dental Surgeon), relinquished his temp. commn. on return to Army duty (Sept. 20).

Memorandum

Maj. R. Hall, O.B.E., late The R. Welch Fus., is granted permission to retain rank of Lieut.-Col., R.A.F., on retirement from the Army.

Reserve of Air Force Officers

The follg. are granted commns. on probn. in the General Duties Branch, in the ranks stated (Oct. 12):—

Class A.—Flying Officer C. W. Carleton, A.F.C. Pilot Officer M. T. Bromley.

Class BB.—Pilot Officer J. P. James. The follg. Pilot Officers are confirmed in rank:—J. Hill, C. W. Lofthouse, R. G. Shaw (Oct. 5); C. W. Carter (Oct. 6); H. S. Fulton (Oct. 7). Flying Officer W. J. Buchanan, D.F.C., is transferred from Class A to Class C (September 6).

The follg. Flying Officers relinquish their commns. on completion of service: J. Fairbairn (Aug. 28); S. C. Rose (Sept. 12); W. J. Sivewright (Sept. 12); G. L. G. Watson, M.M. (Sept. 19); H. Hoad (Oct. 10). The commn. of Pilot Officer on probn. G. W. Phillips is terminated on cessation of duty (Sept. 21).

Princess Mary's R.A.F. Nursing Service

Miss E. M. Burton resigns her appt. as Sister (Aug. 19).

ROYAL AIR FORCE INTELLIGENCE

Appointments.—The following appointments in the Royal Air Force are notified:—

General Duties Branch

Squadron Leaders: R. H. M. S. Saundby, M.C., D.F.C., A.F.C., to No. 58 Sqdn., Worthy Down, on transfer to Home Estab.; 15.10.26. R. Halley, D.F.C., A.F.C., to H.Q., Cranwell; 1.10.26. L. C. Keeble, to H.M.S. *Hermes*; 7.10.26. G. H. P. Padley, to Central Flying Sch., Upavon; 4.10.26. L. F. Forbes, M.C., to No. 7 Sqdn., Bircham Newton; 11.10.26. H. I. Hammer, D.F.C., to No. 13 Sqdn., Andover; 1.10.26. W. Sowrey, D.F.C., A.F.C., to No. 2 Sqdn., Manston; 1.10.26.

Flight Lieutenants: F. Beaumont, to R.A.F. Depot, Uxbridge; 11.10.26. J. F. Lawson, A.F.C., to Heliopolis Details, Egypt; 21.9.26. W. S. Allen, to H.Q., No. 21 Group, West Drayton; 7.10.26. F. W. Walker, D.S.C., A.F.C., to School of Naval Co-operation, Lee-on-Solent; 4.10.26. S. M. Kinkad, D.S.O., D.S.C., D.F.C., to R.A.F. Depot, Uxbridge, on transfer to Home Estab.; 27.9.26. S. L. G. Pope, D.F.C., to R.A.F. Depot, Uxbridge, on transfer to Home Estab.; 27.9.26.

Flying Officers: E. F. Haylock, to No. 503 Sqdn., Waddington; 12.10.26. C. Sutton, to R.A.F. Depot, Uxbridge, on transfer to Home Estab.; 19.9.26. R. L. Yates, to R.A.F. Depot, Uxbridge, on transfer to Home Estab.; 11.9.26. R. F. Overbury, to R.A.F. Depot, Uxbridge, on transfer to Home Estab.; 21.9.26. (Hon. Flight-Lieut.) G. Anderson, to R.A.F. Depot, Uxbridge; 11.10.26. J. A. Mollison, to Electrical and Wireless Sch., Flowerdown; 13.10.26. G. J. Gaynor, to Elec. and Wireless Sch., Flowerdown; 8.10.26. C. F. Caunter, to Station H.Q., Northolt; 11.10.26. A. H. Wheeler, to No. 111 Sqdn., Duxford; 18.10.26. H. R. McL. Reid, D.F.C., to R.A.F. Cadet College, Cranwell; 12.10.26. C. F. H. Grace, to Home Aircraft Depot, Henlow; 15.10.26. E. A. H. Fisher and I. W. C. Mackenzie, to Armament and Gunnery Sch., Eastchurch; 12.10.26.

Pilot Officers: C. Pitt-Hardacre, to R.A.F. Depot, Uxbridge, on transfer to Home Estab.; 4.10.26. H. Broadhurst, to No. 11 Sqdn., Netheravon, on appointment to a Short Service Commn.; 1.10.26.

Stores Branch

Flight Lieutenants: J. Landon, to Station H.Q., Upavon, 6.9.26. W. J. King, D.C.M., to No. 21 Group H.Q., West Drayton, on transfer to Home Estab.; 11.10.26.

Flying Officers: L. V. Hirst, J. R. R. Harvey, J. W. Hustwaite, M. F. Tomkins and L. W. Park, to School of Store Accounting and Storekeeping, Kidbrooke, 1.10.26. J. W. Mitchell, to School of Store Accounting and Storekeeping, Kidbrooke, 30.9.26.

Flying Officers: C. B. Horsfield, to R.A.F. Training Base, Leuchars, 3.9.26. A. G. S. Tuke, to H.M.S. *Hermes*; 7.10.26. L. Horwood, M.C., to Marine Aircraft Experimental Estab., Felixstowe; 8.10.26.

Pilot Officer L. F. Caunter, to No. 4 Sqdn., S. Farnborough, 14.9.26.

Pilot Officers: The undermentioned Pilot Officers are posted to H.Q., R.A.F., Cranwell, on appointment to Permanent Commns. (on probation), with effect from 9.10.26:—J. E. R. Sowman, O. W. T. Rogers, A. A. Quayle, W. A. D. Collingwood, M. S. Shapeott, C. I. Fry, R. B. Horstmann, R. B. Brown, R. S. Sawyer, T. I. Iliff, W. A. Stagg, C. J. Nobbs, H. D. Jackman, E. H. Walker, E. G. Northway, and W. G. S. Wood.

Medical Branch

Flight Lieutenant (Dental): E. A. Wheeler, to R.A.F. Depot, Uxbridge, on appointment to a Temp. Commn.; 1.10.26.

Flying Officers: N. I. Smith, M.B., to Research Lab. and Medical Officers' Sch. of Instruction; 8.10.26. H. Penman, M.B., to Research Lab. and Medical Officers' Sch. of Instruction, on appointment to a Short Service Commn.; 8.10.26. E. A. Rice, M.B., to Aeroplane and Armament Experimental Estab., Martlesham Heath; 3.10.26.

Chaplains' Branch

Rev. A. W. Brown, M.A., B.D., to Station H.Q., Upavon; 7.10.26. Rev. W. T. Rees, B.D., to H.Q., Egypt; 21.9.26. Rev. G. A. Davies, B.A., to Home Aircraft Depot, Henlow, on transfer to Home Estab.; 21.10.26.



Showing the Red Flag by Air: Soviet Russia is making every effort not to lag behind in the world of aeronautics, and recently the Russian pilot, Capt. Gromov, accompanied by his mechanic, Radzevich, made a tour of Europe in a Russian-built biplane fitted with a Napier "Lion" engine. They left Moscow on August 31 and flew to Königsberg, Berlin, Paris, Rome, Vienna, Prague, Warsaw, and back to Moscow (September 3.) Our picture shows the machine at Rome. The "Ant," as the machine is called, is of all-metal construction, and maintained an average speed of 115 m.p.h. over the 4,350 miles.

A De Havilland "Moth" for the Rajah of Bhong: Mr. George Graves visits "the aeroplane shop" in New Bond Street, London, W., in his 18-50 h.p. Crossley "Six," to buy a De Havilland "Moth" for his old friend, the Rajah of Bhong. On Mr. Graves' right are Mr. A. Melvin Robertson, sales manager to Crossley Motors, Ltd., and Mr. S. T. Lea. On his left is Mr. J. H. Adams, in his day a famous cyclist, the holder of a record number of championships and records, and now averaging 2,500 miles per week on British roads in the interests of Crossley Motors, Ltd.



LIGHT 'PLANE CLUB DOINGS

London Aeroplane Club

The weather was responsible for three blank days during the past week. Full advantage, however, was taken on Saturday and Sunday when the conditions were ideal. On Sunday 42 members took the air, of which 17 made solo flights. During the week-end the Club was assisted in instructional flying by Mr. R. W. Reeve, of the "D.H." school. The total flying for the week was 34 hrs. 5 mins.

The following Members had instruction:—G. C. Bonner, T. C. Sharwood, E. K. Blyth, Miss O'Brien, O. J. Marstrand, E. J. B. King, G. H. Saxon Mills, J. H. Saffery, L. Lester, H. M. Samuelson, Miss Fletcher, V. H. Doree, N. H. Jones, L. Martin, H. Solomon, S. C. Richards, T. L. Gardner, Sir John Rhodes, H. Kennedy, F. Clarkson, F. C. Elford, G. N. Howe, A. S. Richardson, W. L. S. McLeod, H. Spooner, M. P. Susman, J. J. Hofer, H. R. Presland, J. G. Crammond, R. A. St. John, L. G. Sykes.

The following Members made solo flights:—E. K. Blyth, Miss O'Brien, E. L. O. Baddeley, Mrs. S. C. Elliott-Lynn, K. V. Wright, O. J. Tapper, A. R. Ogston, Major K. M. Beaumont, E. E. Stammers, W. Hay, J. H. Saffery, N. H. Jones, G. H. Craig, J. Barros, A. Lees, E. S. Brough, A. G. D. Alderson, N. J. Hulbert, H. Kennedy, H. Petre, W. Roche-Kelly. The following Associate Members had joy rides:—R. Andrews, Mrs. Woods Humphrey, Master Hay, L. C. Davey, G. H. Weston.

The following Members have received permission to carry passengers:—A. G. D. Alderson, Major K. M. Beaumont, W. T. Hay, N. H. Jones, L. J. C. Mitchell.

It is now possible to give more joy rides to Associate Members, and it is hoped that Associate Members will now visit the Aerodrome more frequently. On Sunday E. K. Blyth carried out the tests for his Aviator's Certificate.

The Hampshire Aeroplane Club

Report for week ending October 14:—Total flying time, 7 hrs. 33 mins.; instruction flying, 6 hrs. 5 mins.; passenger flying, 48 mins.; solo flying, 40 mins.

The following members received instruction:—Lieut. Graham, R.N., 1 hr. 20 mins.; Messrs. Perfect, 40 mins.; Rumble, 30 mins.; Stokes, 30 mins.; Shepherd, 25 mins.; Courtney, 20 mins.; Bound, 20 mins.; Van den Bergh, 20 mins.; Kerry, 15 mins.; Westbrook, 15 mins.; Cooper, 15 mins.; Heathcotte, 15 mins.; Maloney, 15 mins.; Miss Home, 15 mins.; Nicholson, 10 mins.

The following members received passenger flights:—Mrs. M. Wood, Mrs. D. Wood, and Mr. Massey.

The following members flew solo:—Mr. O. E. Simmonds, F/O. Clarkson, Messrs. Perfect and Bowen.

No flying was possible on Saturday owing to a hurricane. On Tuesday of last week Mr. R. V. Perfect, the hard-working Hon. Secretary of the club, successfully flew his first solo as recorded above. In view of the terrific amount of secretarial work involved in the running of the club, it is difficult to imagine when he has four time to learn to fly.

The Lancashire Aero Club

Report for week ending October 15:—The weather permitted flying on Sunday afternoon. Total time for week, 3 hrs. 40 mins., made up as follows:—

Dual with Mr. Scholes: Cohen, 20 mins.; Moore, 15 mins.; Blagden, 15 mins.; Newton, 10 mins.; Shires, 10 mins.

Solo: Leeming, 45 mins.; Pitman, 45 mins.; Lacayo, 30 mins.; Williams, 10 mins.; test, 5 mins.

This record total seems to give the signal for an annual report in the approved style, thus:—

The club has now completed a year's flying as one of the six clubs originally approved of by the Air Ministry. Several flights have been made and the total distance flown (reckoning the average height of the aerodrome at 242 ft., a.s.l. and the barometer steady at "stormy" throughout, and correcting the air-speed indicator readings accordingly) is approximately 59,333 miles, 587 yards. In addition, owing to the direction of the prevailing wind, a distance of 3,019 miles, one rod, pole or perch has been covered on the deck.

It is very satisfactory to be able to place on record that there have only been four crashes—one from mental defect, one from loss of direction (when taking off), and two from the pilot losing his speed in the air.

Giving the Gosport's Mono engine credit for an average of 850 r.p.m., and including starting up on cold mornings, it is estimated that the club's engines have revolved approximately 1,612,948½ times and no mechanical trouble has been experienced except through engines refusing, or ceasing, to function in a normal manner. In the same way, nothing larger than a wheel, or the pilot's hat, has ever fallen off any of the machines while in flight. (These facts reflect considerable credit on the ground staff.) During the whole period no instructor has been injured. (This reflects the greatest credit on the pupils.)

Among the club's successes at the various meetings held may be mentioned the following:—Gifts of aeroplanes by Sir C. C. Wakefield, Bart., the Directors of A. V. Roe and Co and Colonel Darby, and the petrol distributing companies. Licence for use of aerodrome obtained after prolonged combat between opposing forces of solicitors with heavy casualties on both sides. Promise of an aeroplane from Mr. Sydney Norris. Promise of substantial help from Colonel Groves. That's all, except perhaps that a number of people have been taught to fly and are doing so, in spite of their friends' advice.

The Newcastle-upon-Tyne Aero Club

Flying report for week ending October 17:—Owing to the absence of Mr. Brown, flying has been impossible during the week, but he is now back to the club and better things are hoped for during the next week.

The Midland Aero Club

Report for week ending October 16:—Very bad weather, accompanied by high winds, considerably restricted flying during the week. Total flying time was 4 hrs. 43 mins. The following members were given dual instruction: C. Fellowes, S. H. Smith, E. J. Brighton, A. B. Gibbons.

The following members made solo flights:—R. L. Jackson, E. J. Brighton, J. Brinton, G. Perry, W. Swann, H. Willis.

AERONAUTICAL PATENT SPECIFICATIONS

(Abbreviations: Cyl. = cylinder; i.c. = internal combustion; m. = motor. The numbers in brackets are those under which the Specifications will be printed and abridged, etc.)

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